

January 27, 2012
1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Fisheries Bureau
Endangered Species Coordinator
Missoula Office

Montana State Library, Helena

MT Environmental Information Center

Montana Audubon Council

Montana Wildlife Federation

Wayne Hadley, 1016 Eastside Road, Deer Lodge, MT 59722

Montana River Action, 304 N 18th Avenue, Bozeman, MT 59715

North Powell Conservation District, 1002 Hollenback Road, Suite C, Deer Lodge, MT 59722

U.S. Army Corp of Engineers, Helena

U.S. Fish and Wildlife Service, Helena

State Historic Preservation Office, Helena

Watershed Restoration Coalition, 1002 Hollenback Road, Deer Lodge, MT 59807

Trout Unlimited, 111 N. Higgins, Suite 500, Missoula, MT 59802

Doug Johnson, 100 Emery Road, Deer Lodge, MT 59722

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for the Future Fisheries Improvement Program. The Program tentatively plans to provide partial funding for a project calling for the restoration of approximately 2,200 feet of Cottonwood Creek, a tributary to the Clark Fork River. The project calls for re-aligning approximately 940 feet of stream channel, constructing about 1,400 feet of inset floodplain benches and installing approximately 5,000 feet of riparian fencing to control livestock access. The intent of the project is to improve habitat conditions for resident and migratory fish. The project site is located just north of the town of Deer Lodge on property owned by Doug Johnson in Powell County.

Please submit any comments that you have by 5:00 P.M., February 27, 2012 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Funding for this project through the Future Fisheries Improvement Program is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432. Please note that this draft EA will be considered as final if no substantive comments are received by the deadline listed above.

Sincerely,

Mark Lere, Program Officer
Habitat Section
Fisheries Bureau
e-mail: mlere@mt.gov

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Cottonwood Creek Channel Restoration Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 which directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. The program calls for the enhancement of bull trout and cutthroat trout through habitat restoration, natural reproduction and reductions in species competition by way of the Future Fisheries Program.

The Future Fisheries Program is proposing to provide partial funding to a project designed to restore approximately 2,200 feet of Cottonwood Creek, a tributary to the Clark Fork River. The intent of this project is to improve habitat conditions for resident and migratory native fish, as well as for fluvial brown trout. The project site is located just north of the town of Deer Lodge in Powell County on property owned by Doug Johnson.

I. Location of Project: This project will be conducted on a reach of Cottonwood Creek located just north of the town of Deer Lodge within Township 8 North, Range 9 West, Section 34 in Powell County (Attachment 1). The project site is located on property owned by Doug Johnson.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six year operations plan for the fisheries program is to “restore and enhance degraded habitats” by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on public and private lands. This proposed project would help meet this goal.

Cottonwood Creek is a tributary to the Clark Fork River that supports brook trout, brown trout and westslope cutthroat trout. A westslope cutthroat trout, radio-tagged in the Clark Fork River, was tracked 5 miles up Cottonwood Creek in 2010, indicating a remnant fluvial population may still exist. The project reach has been straightened in the past and currently exhibits shallow and over-widened channel conditions, as well as a sparse riparian vegetative community (Attachment 2). Floodplain berms and rustic rip-rap historically have been randomly installed throughout the stream reach. This proposed project would restore a degraded reach of the stream and improve habitat conditions for fluvial fish, including brown trout and westslope cutthroat trout.

III. Scope of the Project:

This project calls for restoring a 2,200-foot reach of Cottonwood Creek by re-aligning approximately 940 feet of straightened stream channel, constructing floodplain benches along 1,400 feet of channel, installing six rock weirs and three rock vanes to control grade and create pool habitat (Attachment 3), and installing 5,000 feet of electric fencing to control livestock access. Additionally, the project calls for installing three engineered log jams for bank stabilization and habitat (Attachment 4) and installing one hardened livestock

crossing. Floodplain benches would be constructed from wetland sods borrowed from a nearby site on the ranch and stream banks subjected to significant shear stress would be protected with a series of soil lifts composed of sods protected with overlain biodegradable coir matting (Attachment 5). All constructed benches would be underlain with willow sprigs and planted with bare-root native shrubs. The restoration design follows natural bank full dimensions and provides a floodway capacity for the 50-year flood event. The landowner is committed to removing all livestock grazing pressure from the newly restored stream corridor using electric fencing.

This project is expected to cost \$140,063.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$53,733.00. The remaining funding would come from other sources and from in-kind services:

Contributor	In-kind service	In-kind cash
WRC Coordinator	\$4,900.00	
Landowner	\$13,300.00	
NRD Program		\$61,305.00 (not secured to date)

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

This reach of Cottonwood Creek currently supports brook trout, brown trout and a few fluvial westslope cutthroat trout. Restoring a 2,200- foot degraded reach of the stream, improving floodplain connectivity and enhancing the associated riparian corridor is expected to improve aquatic habitat diversity and increase existing fish populations. The proposed floodplain and riparian re-vegetation efforts are expected to enhance habitat for riparian dependent wildlife.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. To minimize turbidity, operation of equipment in the active channel will be minimized to the extent practicable. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota (318 authorization). A 310 permit (Montana Natural Streambed and Land Preservation Act) will be obtained from the local conservation district and the U.S. Army Corp of Engineers will be contacted to determine the requirements to meet the federal Clean Water Act (404 permit). In the long term, water quality is expected to be improved by reducing stream bank erosion rates within a 2,200-foot reach of the stream.

3. Geology, soil quality and moisture.

Soils within the footprint of the project area would be disturbed during construction (less than 2 acres), but would be stabilized using coir fabric and with re-vegetation (seeding and the planting of riparian shrubs and trees).

4. Vegetation cover, quantity and quality.

Vegetation within the footprint of the project area would be disturbed during construction, primarily involving non-native grasses. Re-vegetation efforts and implementation of a riparian management plan would mitigate for this disturbance.

5. Aesthetics.

Aesthetics would be negatively impacted during project construction due to ground disturbance and the presence of heavy equipment. In the long term, aesthetics would be enhanced by restoring a degraded reach of stream to a healthier and more natural stream environment. The project is expected to be completed in about three weeks.

7. Unique, endangered, fragile or limited environmental resources.

A westslope cutthroat trout radio tagged in the Clark Fork River in 2010 was tracked five miles up Cottonwood Creek, indicating that there might a remnant fluvial population of westslope cutthroat trout using the stream for spawning and rearing habitat. This project is expected to improve habitat conditions in the lower reaches of Cottonwood Creek and, as a result, may enhance fluvial westslope cutthroat trout.

9. Historic and archaeological sites.

The proposed project may require an individual Army Corp of Engineers 404 permit. Therefore, the State Historic Preservation Office will be contacted to determine the need for compliance with the federal historic preservation regulations. Future Fisheries funding will not be made available until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment.

7. Access to & quality of recreational activities.

The intent of the project is to improve aquatic habitat diversity within a reach of Cottonwood Creek to enhance fish populations, including fluvial fish residing in the Clark Fork River. As a result, the project may enhance the recruitment of fish to the Clark Fork River.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no funding was provided, the applicant would have to either seek additional sources of funding to complete the project or this portion of Cottonwood Creek would remain degraded. Vegetation within the riparian corridor also would remain degraded and the opportunity to enhance resident and fluvial fish populations would be lost.

2. The Proposed Alternative

The proposed alternative is designed to provide partial funding to a project calling to restore approximately 2,200 feet of lower Cottonwood Creek. This alternative is expected to enhance aquatic habitat and fish populations residing in the stream, and improve the riparian vegetative community. Fluvial brown trout and westslope cutthroat populations also are expected to be enhanced.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The project application to the Future Fisheries Improvement Program has been posted on the Montana Fish, Wildlife and Parks webpage for public comment. No comments have been received to date. The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and funding will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on Montana Fish, Wildlife and Parks webpage: fwp.mt.gov.

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on February 27, 2012.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
Habitat Protection Section
Fisheries Bureau
Montana Department of Fish, Wildlife and Parks
1420 East 6th Avenue
Helena, MT 59620
Telephone: (406) 444-2432
e-mail: mlere@mt.gov

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Cottonwood Creek Channel Restoration Project

Division/Bureau Fisheries Bureau -Future Fisheries Improvement

Description of Project The Future Fisheries Improvement Program is proposing to provide partial funding to a project designed to restore approximately 2,200 feet of Cottonwood Creek, a tributary to the Clark River. The intent of the project is to improve habitat conditions for resident and migratory native fish, as well as fluvial brown trout. The project site is located just north of the town of Deer Lode in Powell County.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites					X	X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

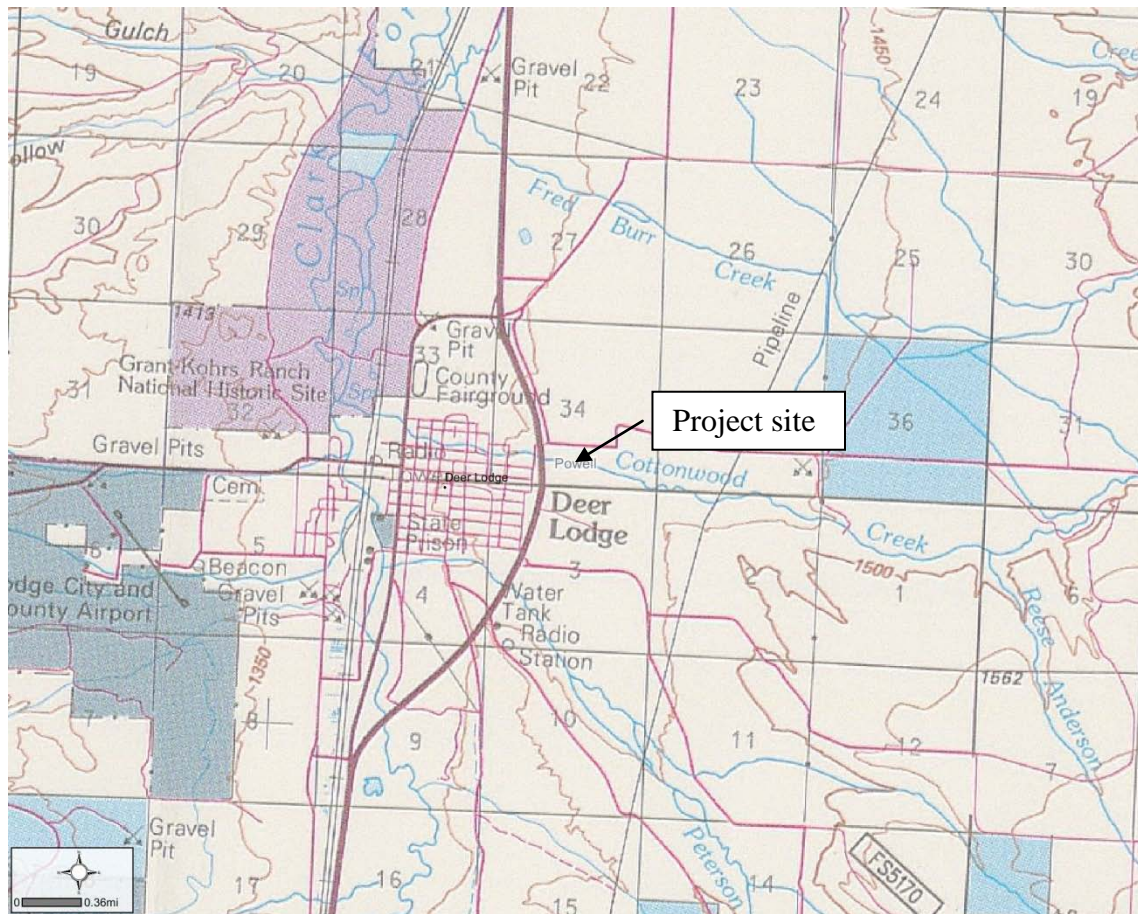
	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction North Powell Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office
 Individuals or groups contributing to this EA Will McDowell, Watershed Restoration Coalition.

Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere

Date: January 23, 2012

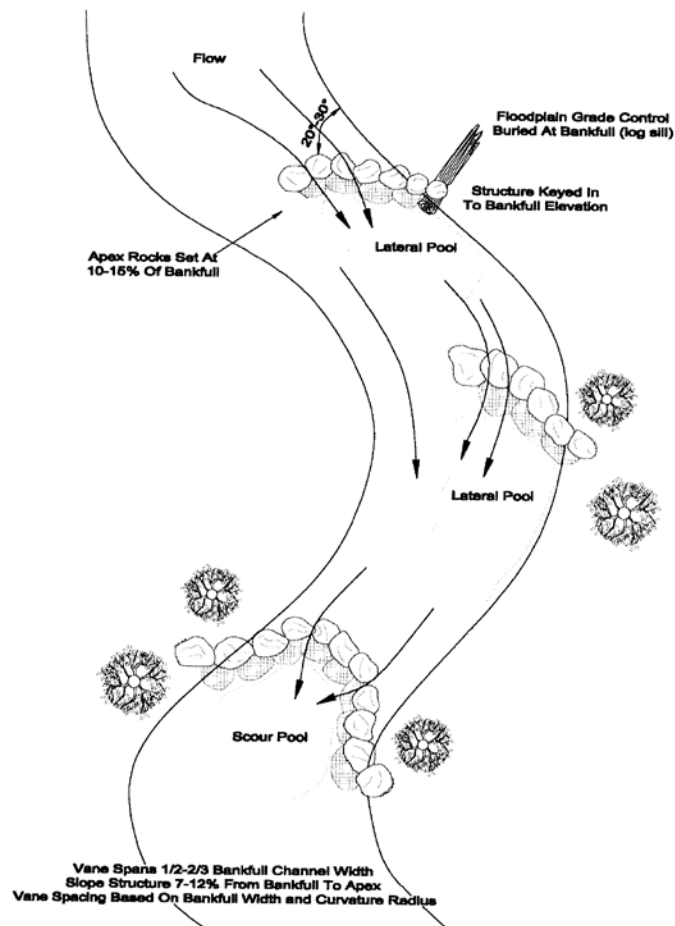


Map showing location of project site on Cottonwood Creek
ATTACHMENT 1

Figures 4 - 7. These pictures of the Cottonwood Creek project site show channelized stream reaches, eroding streambanks, poor habitat conditions, and a lack woody understory vegetation throughout the riparian corridor due to historic over-grazing.

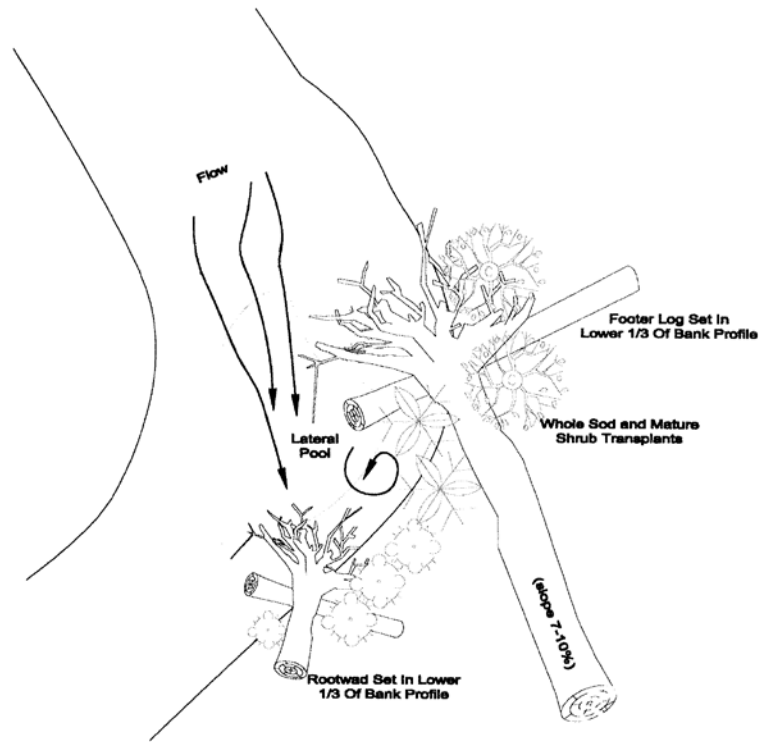


ATTACHMENT 2



This plan view diagram is of a series of vanes and a V-weir structure that will be used to protect streambanks on Cottonwood Creek, as well as provide fisheries habitat. These sequential pools will provide spawning habitat and juvenile fish cover. Small woody debris will be placed along the edge of the pools for additional habitat.

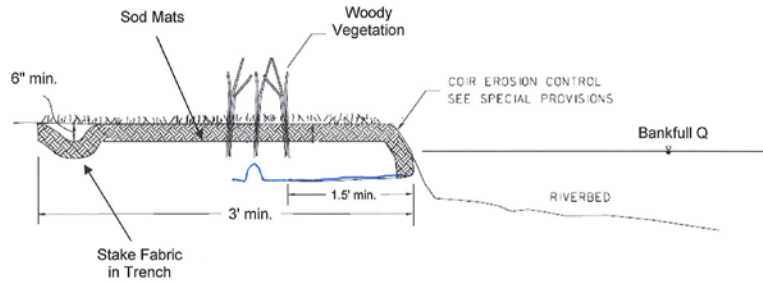
ATTACHMENT 3



Effective Bank Protection = $2-2.5 \times$ Vane Length
(per structure)

Engineered log jams contain numerous smaller stems placed in between a larger base structure. Pictured above is the base structure and the numerous smaller stems will be added to increase complexity and near bank roughness.

ATTACHMENT 4



COIR EROSION CONTROL

1. Sub-excavate banks
2. Lay lower fabric a minimum 1.5' into bank
3. Backfill with native material and sod mats
4. Wrap fabric over bank and sod mats
5. Extend fabric minimum 3.0' from bank's edge
6. Stake fabric in trench to secure and bury
7. Install woody vegetation to specs

The inset lower banks (inset floodplains) will be protected either with sod mats or with coir fabric as pictured above. The willow sprigs laid at water's edge will extend at least 3 feet into the streambank with no more than 1-foot of the tips protruding into the active channel. These sprigs will be set below the bankfull to level.